

REMARKS

As a preliminary matter, Applicant thanks the Examiner for indicating that the previous objection to claim 1 has been withdrawn.

Claims 1-6 are all the claims pending in the present application. In summary, the Examiner maintains the previous prior art rejections and adds new arguments in the *Response to Arguments* section of the Office Action. Specifically, claims 1-6 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Claim 1 remains rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Baker et al. (U.S. Patent No. 3,472,331) in view of Iizuka et al. (U.S. Patent No. 5,224,563). Claims 2-6 remain rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Baker in view of Iizuka and Nelson (U.S. Patent No. 3,468,389).

§112, second paragraph, Rejections - Claims 1-6

Applicant submits that claims 1-6 satisfy 35 U.S.C. § 112, second paragraph.

§103(a) Rejections (Baker/Iizuka) - Claim 1

Claim 1 is rejected based on substantially the same reasons set forth in the previous Office Action. The Examiners new arguments are set forth in the *Response to Arguments* section of the present Office Action.

With respect to independent claim 1, Applicant previously argued that the applied references, either alone or in combination, do not disclose or suggest at least, “a first knuckle which is connected to a non-rotary side of the direct drive motor and locked in a steering direction,” and “a second knuckle which is connected to a steering rod and to the first knuckle in such a manner that it can turn on a king pin axis in the steering direction and is fitted with a brake unit and the wheel,” (emphasis added) as recited in claim 1. *See pages 7-9 of Amendment dated October 18, 2007.* In response, the Examiner alleges, in part:

Applicant's comments, filed with the Amendment, have been carefully considered. ... One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response, Applicant submits that the previous arguments were not intended to attack references individually even though the rejections are based on combinations of references.

Applicant was simply responding to the assertions of the Examiner about what the individual references allegedly disclose and how Applicant believes there is no teaching or suggestion in either of the applied references, either alone or in combination, that each and every feature of the claimed invention, as recited in claim 1, is satisfied.

Further, the Examiner alleges:

As regards the reference to Baker and the provision of a steering rod, the examiner agrees that Baker does not explicitly illustrate this element. Applicant is reminded, as was noted previously, the Baker's structure is explicitly steerable, and the use of a steering rod connected to a turnable knuckle portion is exceptionally old and notoriously well known (note, for example such teachings as presented in Iizuka et al. and Yamashita et al., both cited previously), as such, it is deemed obvious to provide an old and very commonly known arrangement to implement the steerability which is already conceptually anticipated by Baker.

In response, Applicant submits that even if, *arguendo*, it is old and well known in the art that a steering rod could be connected to a turnable knuckle portion, there is no teaching or suggestion of how a steering rod, which is not shown in the applied references, would be connected with the particular arrangement of the present claimed invention. Here, claim 1, for example, recites two separate knuckles, a first knuckle and a second knuckle, and their respective accompanying features. Therefore, a general statement of it being old and well known in the art for a steering rod to be connected to a knuckle does not necessarily satisfy the claimed features and arrangements set forth in claim 1.

Further, Applicant submits that Iizuka does not disclose an in-wheel motor system, since the motor 21 (the non-rotating side of the motor) according to Iizuka is connected to vehicle body and not connected to the non-rotating part (knuckle) in a vehicle wheel.

Also, the Examiner asserts that it is well known to provide “a motor associated with a non-steered portion” (page 4, line 3 in the Office Action). The Examiner appears to be asserting that Iizuka is configured to disconnect the non-rotating part of the motor from the steered linkage. However, Applicant submits that it is only natural that the vehicle body and the steered linkage are disconnected from each other. There is no ground for the assertion of the Examiner that the non-rotating part and the steered linkage are disconnected from each other in Baker and Iizuka.

Further, since Baker and Iizuka do not disclose or suggest how the in-wheel motor is installed, Applicant submits that one of ordinary skill in the art would not have arrived at the feature of the present invention that a “non-rotating side of the motor is connected to the first knuckle,” by combining Baker and Iizuka.

Also, as submitted in the previous Amendment, Applicant reiterates that since Baker and Iizuka do not show a motivation that a moment of inertia on a steering shaft is reduced, one of ordinary skill in the art would not have arrived at a configuration that a non-rotating side of the motor is connected to a first knuckle.

At least based on the foregoing, as well as the previously submitted arguments, Applicant maintains that the applied references, either alone or in combination, do not render claim 1 unpatentable.

§103(a) Rejections (Baker / Iizuka / Nelson) - Claims 2-6

Applicant maintains that dependent claims 2-6 are patentable at least by virtue of their indirect or direct dependencies from independent claim 1. Nelson does not make up for the deficiencies of Baker and Iizuka.

Further, with respect to dependent claims 5 and 6, Applicant previously argued that the applied references, either alone or in combination, do not disclose or suggest at least, "wherein the output shaft of the motor and a wheel support hub mounted to the second knuckle are interconnected by constant velocity joints," and "wherein the rotary portion of the motor and the wheel are interconnected by a flexible coupling having at least two direct-moving guides connected to each other in such a manner that their moving directions cross each other in the axial direction of the motor and a constant velocity joint-like coupling which has the center of its movement on a king pin axis and turns in the steering direction," as recited in claims 5 and 6, respectively. *See page 10 of October 18th Amendment.* In response, the Examiner alleges:

As regards the provision of CV joints, these elements are found in both the references to Baker (20-26, 26-28, particularly in the illustrated orientation) and Iizuka et al. (proximate 26, again in the illustrated orientation). As regards the very broad recitation of connection absent any further limitation in claim 6, note that in the combined references, in an interpretation of similar breadth to the recitation itself, the rotary portion of the motor is connected to the motor case, which is mounted to the vehicle through the buffer and direct moving guides, which include a flexible coupling (e.g., the buffer portions), the connection to the wheel being made through the wheel bearing, knuckle elements and non-turning knuckle supports connected to the vehicle; the arrangement further having a "CV joint-like coupling" (e.g., Baker at 20-26, 26-28).

To satisfy the features of claims 5 and 6, the Examiner simply cites couplings 20-26 and 26-28 of Baker and universal joint 26 of Iizuka. Couplings 20-26 and 26-28 are simply couplings between a driven axle 28 and a joint yoke 20. Further, in Iizuka, there is no motor even illustrated therein. Therefore, with respect to claim 5, for example, clearly the applied references do not satisfy the features of this claim, as claim 5 recites that an output shaft of a

motor and a wheel support hub mounted to a second knuckle are interconnected by constant velocity joints. This particular arrangement is nowhere shown in Baker or Iizuka. Similarly with respect to claim 6, the specific arrangement and features set forth in this claim are not satisfied by the alleged corresponding elements cited by the Examiner in the Office Action.

Therefore, at least based on the foregoing as well as the previously submitted arguments, Applicant maintains that claims 2-6 are patentably distinguishable over the applied references, either alone or in combination.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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